



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,735	04/08/2004	Michael E. Ring	MER 04069	1527
<div>7590 JAMES RAY &amp; ASSOCIATES 2640 Pitcairn Road Monroeville, PA 15146</div>			<div>EXAMINER LE, MARK T</div>	
			<div>ART UNIT 3617</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE 10/19/2007</div>	<div>DELIVERY MODE PAPER</div>

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/821,735	<b>Applicant(s)</b> RING, MICHAEL E.	
	<b>Examiner</b> Mark T. Le	<b>Art Unit</b> 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This communication is responsive to the amendments filed on September 14, 2007. Applicant's amendments and arguments have been carefully considered.
2. The replacement sheet of drawing Fig. 7 is not approved for entry because the specific arrangement of the elements of EOT device, as shown in the proposed Fig. 7, is not supported by the originally filed disclosure. To correct this problem, Applicant is suggested to provide a new drawing showing the EOT device and the associated elements in the form of a box diagram, which includes rectangular boxes representing the EOT device and the components thereof or associated therewith. Since the proposed drawing correction filed on September 14, 2007 has not been approved for entry, the previous objections to the drawings are again repeated below.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed electronic circuit disposed on a body portion of the EOT device, as recited in part (c) of claim 1; the means for sensing a magnetic field, claim 14, which is a hall effect switch, claim 14; and the power supply being in the form of a battery, as recited in instant claim 19, must be shown or the features must canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The wordings in part (c) claim 21 are not clear. Specifically, it is not clear as to the claimed relationship between the associated wiring and the positioning of the electronic circuit, as recited in part (c) of claim 21. Proper correction is required.

5. Claims 1-2, 4-7, 10-11, 17-19 and 21 (21 as best understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Crossley (US 4,512,483) in view of Bezos (US 5,873,638).

Crossley discloses a truck assembly for a model railway vehicle including a removable coupler 40. It is noted that Crossley's truck assembly does not have an EOT device and an electronic circuit associated with the EOT device.

Bezoz discloses an EOT device that can be easily installed on and removed from a coupler of a railway vehicle; wherein, the EOT device associated with a control system includes an electronic circuit unit 20 mounted in battery compartment of 17 of the EOT. The electronic circuit unit 20 of Bezoz associates with light element 15 and includes connector 26 designed to mate with a corresponding connector on the associated cable/wiring on an associated railway vehicle.

In view of Bezoz, it would have been obvious to one skilled in the art to provide an EOT device along with an associated electronic circuit on coupler 40 of Crossley, in a manner similar to that taught by Bezoz, so as to achieve realistic look and feel of a real railway vehicle. Regarding the instant claimed electronic circuit being disposed only on a removable truck portion, note that the associated electronic circuit of Crossley's structure, as modified, is housed in the housing of the EOT device, and is disposed only on coupler 40 that is a removable truck portion, as claimed.

It is noted that the EOT device of Bezoz is designed for a full-scale railway vehicle; however, it would have been obvious to one skilled in the art to configure the structure of Bezoz in a reduced-scale for use on reduced-scale railway vehicles, such as that of Crossley, so as to enhance the realistic look and feel of the reduced-scale railway vehicles. Note also that when the structure of Bezoz is configured for use on the reduced-scale railway vehicles that have reduced or simplified functionalities as comparing to their resembling full-scale railway vehicles, it would have been obvious to one skilled in the art to also correspondingly reduce or simplify the functionalities of

Art Unit: 3617

Bezos' EOT device so as to be consistent with the existing functionalities of the reduced scale railway vehicles, for proper operations.

Regarding the size of the electronic circuit being small enough, as recited in instant claim 2, note that the electronic circuit unit of Bezos, as modified, is small enough to be mountable on a truck portion as claimed.

Regarding the instant claimed microcontroller, as recited in instant claim 4, consider microprocessor 36 of Bezos.

Regarding the instant claimed number of contacts being up to eight, as recited in instant claim 12, note that such limitation is broad enough to cover a range of zero to eight contacts; therefore, the instant claimed broad limitation is considered met by the structure of Crossley, as modified.

Regarding the instant claimed control system being in the form of analog or digital, as recited in instant claims 17-18, note that electrical signals in the forms of analog and digital are well known alternatives (Official Notice is taken), and it would have been obvious to one skilled in the art to configure the system of Crossley, as modified, to operate with either analog or digital signals so as to be compatible with the type of signals of the associated existing train devices.

6. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied in claim 1 above and further in view of Young et al (US 2003/0155470).

Regarding the instant claimed light element being a LED, note that light elements in the form of LEDs are well known. Note for example, LED 46 of Young. Therefore, it would have been obvious to one skilled in the art to use a well known LED as the light

Art Unit: 3617

element in the structure of Crossley, as modified, so as to achieve expected advantages thereof, such as compactness, low power consumption, and high reliability and brightness.

7. Claims 3, 8 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied in claim 1 above and further in view of Stan Ames et al's guide to DCC, pages 29-30.

Regarding the power supply for operating the EOT device, note that a power supply in the form that includes a rectifier, a voltage regulator, and electrical contacts is well known in the art of reduced-scale railway vehicles, as evidenced in section 3.2.1 of Stan Ames' guide. Accordingly, it would have been obvious to one skilled in the art to use a well known power supply in the art of reduced-scale railway vehicles, similar to that suggested in Stan Ames' guide, to power the EOT device of Crossley, as modified, so as to take advantage of the existing power supply configurations of the known reduced-scale train systems.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 8 above, and further in view of Wolf (US 2003/0015626).

Regarding the instant claimed use of electrical filters, as recited in instant claim 9, it is note that electrical filters are well known to condition electrical currents in electrical circuits, note for example Figure 4A of Wolf. Accordingly, it would have been obvious to one skilled in the art to apply such well known concept of using electrical filters, in the electrical circuit of Crossley, as modified, so as to effectively condition the electrical currents therein.

9. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied in claim 1 above and further in view of in view of Miller (US 5,174,216).

Regarding the instant claimed device for activating a train accessory being in the form of a magnetic device or Hall effect device, as recited in instant claim 14-15, consider the Hall effect device 10 of Miller. In view of Miller, it would have been obvious to one skilled in the art to alternatively use a Hall effect device to activate the structure of Crossley, as modified, in a manner similar to that taught by Miller, because such Hall effect device is reliable and easy to setup.

10. Applicant's arguments have been carefully considered, but they are deemed moot in view of the new grounds of rejection set forth above.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of




Art Unit: 3617

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark T. Le whose telephone number is 571-272-6682. The examiner can normally be reached on Mon-Fri, between 8:15-4:45 (teleworking).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel Morano can be reached on 571-272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Mark Tuan Le  
Primary Examiner  
Art Unit 3617

mle  
3/6/07

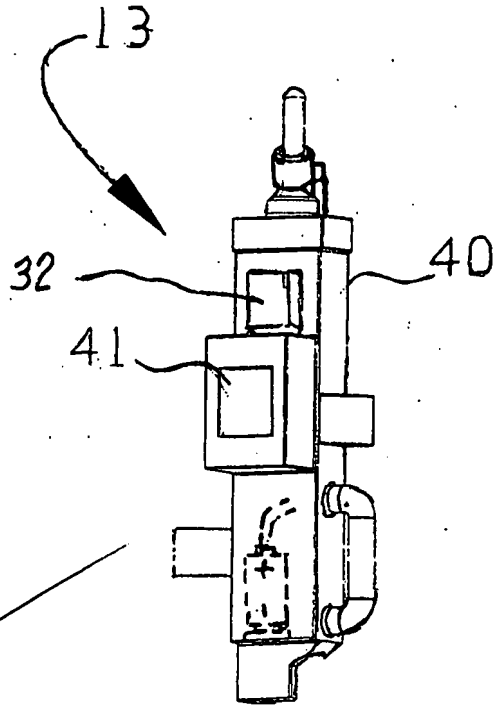


FIG. 7

not  
approved  
for  
entry  
10/16/07  
*[Signature]*